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Nick Hobson Ph.D.

Ritual and the Brain

How Rituals Alter the Brain to Help Us Perform Better

The neuroscience of performance rituals.

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Rafael Nadal, considered one of the best tennis players of all time, is known for his many zany rituals. For example, he always has two drinks with him, a sports drink and a bottle of water. The two bottles are placed at his feet by the sideline bench. One in front of the chair to his left, the other neatly placed behind it on a diagonal towards the side of the court he's playing on.

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According to Nadal, “It’s a way of placing myself in a game, ordering my surroundings to match the order I seek in my head.”



Source: Pexels

There are countless examples of these peculiar athlete rituals. But it’s not limited to just the professional sporting world. Anywhere performance happens, a ritual will be found. From military to medicine to business and education, it’s clear that rituals are an important part of our day to day functioning, helping us **improve our focus, concentration, and attention.**

Why are these seemingly irrational and silly behaviors so pervasive? There's now mounting scientific evidence to show that despite their surface level irrationality, rituals play a crucial role in regulating our performance behaviors.

They help us run faster, jump higher, think more deeply, and solve more quickly. But how exactly does this happen? The answer, according to my new [research](#), lies in the brain and its ability to handle performance anxiety and failure.

The experiment

Along with my collaborators at the University of Toronto, we conducted a study where we hypothesized that rituals help us perform better by controlling our anxiety and minimizing the brain's sensitivity to personal failure.

To test this, we had participants complete a [ritual](#) at home, once a day for a week. The ritual, which we created in the lab, was comprised of a series of highly repeated and ordered action sequences. The actions were meant to approximate the rituals we see in real life, similar to Nadal's bottle placement practice.

After the one week, participants came into the lab where we measured their brain activity. While hooked up, they completed two rounds of a reaction-time task—one round before the ritual and another after. We told them that they would earn more money the better they did on the task. But each time they made an error, which everyone did because the task was designed to be difficult, they would lose money.

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As they performed the task, we tracked their brain activity, specifically in response to making a performance failure (the times when they lost money). As we recorded the brain's response, we pinpointed the neural signal related to performance anxiety and the experience of failure.



Source: Pixabay

The question for us was whether or not doing the ritual was enough to “turn down” the dial on the brain's performance anxiety system during the money-losing failures.

Ritual and reducing performance anxiety

In support of our hypothesis, we found the brain showed reduced activation in response to these personal failures, but only after completing the ritual.

In other words, we show that rituals desensitize the brain's anxiety-related reaction to error, mitigating the negative experience of personal failure.

end up “choking.” But failure, at some level, is almost always inevitable. So the way in which we (and our brains) respond to such setbacks is crucial for our success.

When things get tough, a ritual can be good to turn down the brain’s anxiety dial. It helps performers push on in the face of adversity.

Creating a ritual



Source: Pexels

Rituals aren’t reserved for world-class athletes. We all perform on some level every single day—as employees, managers, teammates, and parents. Whatever your performance role, having a ritual can be a highly effective tool to ensure your brain responds to failure in an adaptive way. If you’re looking to drive peak performance, then consider creating your own personal ritual.

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- Start the day off with a ritual. Rituals appear to be particularly important in the morning because they serve as a fresh start. Tim Ferriss and other high-performing entrepreneurs do these rituals as it helps them win the morning and ultimately win the day. The science is now showing this to be true. A successful ritual (task 1 of the day) means your confidence will carry over into all the other tasks that come up.
- End the day with a ritual. What might be best here is a reflective-type practice, which allows you to look back on the day's events and evaluate how things went. A **gratitude exercise** is one example.
- Perhaps most important, be sure the ritual is your own. Make it personally meaningful. The beauty about these behaviors is that they can be created out of anything. So try it out. You (and your brain) will be glad you did. Who knows, you might even become the next Rafael Nadal.

References

Hobson, N. M., Bonk, D., & Inzlicht, M (2017). Rituals decrease the neural response to performance failure. PeerJ, e3363, doi: 10.7717/peerj.3363.



About the Author



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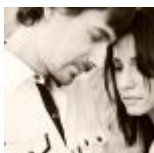


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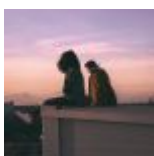
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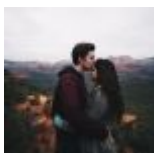
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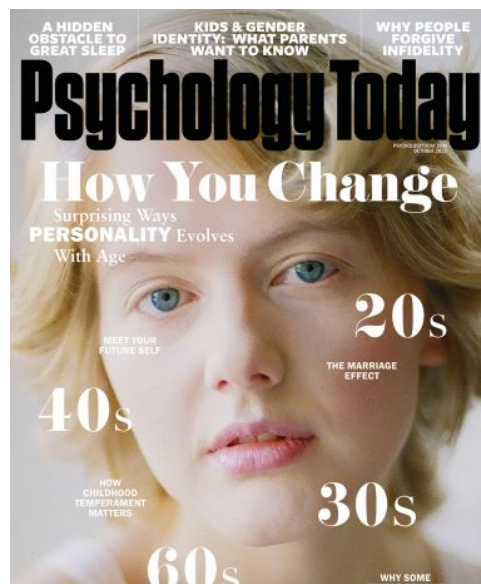
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